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MARYLAND FISHERIES

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THE RELATIVE VALUES OF LAND AND WATER AREAS OF QUEEN ANNE'S COUNTY

By Swepson Earle, Conservation Commissioner

THE GEOGRAPHICAL SITUATION of Queen Anne's County among the Eastern Shore group is very advantageous. The mouth of the Chester River, which forms its northern boundary, is almost opposite the Patapsco and the metropolis of the State, while Kent Island is just opposite the capital, Annapolis.

The water courses of this county, which include the Chester River, Eastern Bay and its tributaries, Wye River and the Chesapeake Bay itself, adjacent to Kent Island, are both picturesque and deep. The average resident of Queen Anne's, takes her waters for granted, as a means of transportation or a source of pleasure, and, to a few, of profit. Their relative value, as compared with the land areas of the county, has never been brought out before, because the Conservation Department, through its Seafood Auditor, has just completed a very careful survey of the water crops of Maryland, which is convincing proof that the 75 square miles of water in this county play a very important role in the economic life of the county, and by comparison show up better than the 380 square miles of agricultural lands.

Queen Anne's County has a total shoreline of 250 miles, and its waters have always been known for oysters. It would be difficult to calculate just how many bushels of oysters have come out of the Chester River and Eastern Bay during the past half century. Since the Conservation Department was created in 1916, consolidating the various State agencies charged with the administration of the seafood laws, great strides have been made in checking depletion and rebuilding the seafood industries. Many important changes have taken place in the production of water crops in Queen Anne's County since 1925, when 111,107 bushels of oysters were marketed. In 1931, the production had jumped to 300,090. The figures for the crab industry show an even greater gain. In 1925, but 1,200 barrels of hard crabs were marketed, whereas in 1931 the record shows 23,094 barrels. Soft crab shipments in 1925 were so small as to be almost negligible. In 1931, 203,268 soft crabs were marketed.

The value of the seafood business to the 1,042 persons actively engaged therein for the year 1930, according to Government and State statistics, was \$371,065. The amount expended by those engaged in this business in the way of taxes is less than \$3,000 annually. To be more explicit, there are 745 fishermen, 280 wage earners engaged in shucking oysters and picking crab meat, and 17 proprietors of seafood packing establishments. We estimate that the proprietors of the seafood houses earned \$30,000, and the United States statistics show that those engaged in the houses earned \$59,255.00 and that the fishermen's catch was worth \$218,810. Licenses, plus a share of the general State tax for the support of the Conservation Department, and half of the expense of maintaining the Chester River patrol boat (which amounted to \$225) brought the total cost of those engaged in the industry to \$3,783. Of this amount, \$1,677.50 was returned to the county for the use of public schools. Thus the actual cost of producing the \$371,065. income was less than \$3,000.

The United States census for 1930 showed that 39.8% of the total population of the country were gainfully employed, and on this basis the seafood industry contributes to the support of 2,610 persons of the total population of 14,571 in Queen Anne's County, or 18%.

The farm land, buildings, machinery and equipment in Queen Anne's County are valued at \$15,075,992, and the value of all crops in 1930 was \$2,241,904. The gross return, there-

fore, was 14-1/5% on the investment. The estimated value of the capital invested in fishing gear, boats and other equipment is approximately \$135,000, so that the fishermen got an actual return of 208% on their investment. To produce the land crop, valued at \$2,241,904, \$15,075,992 were required. On the same basis, the 1930 seafood income for Queen Anne's places a capital value of \$2,613,134 on the county's waters, and this value is increasing each year.

To further illustrate the relative values of the agricultural and water areas, there are 327 square miles of farm areas in Queen Anne's County. The farm population is 7,439 persons, and the income from land crops was \$2,241,904 in 1930. On this basis each square mile of farm area produced 92-1/5¢ per person. There are 75 square miles of water area in the county, from which an income of \$371,065 was received in 1930, and this income contributed to the support of 2,610 persons. Thus, each square mile of water area produced \$1.89 1/2 per person, or more than twice as much as the farming area.

The question that may well be asked at this time is: "What is the Conservation Department doing to maintain the oyster and crab production of Queen Anne's County?"

Under the Acts of the General Assembly of 1927, the State was empowered to plant oyster shells on depleted oyster bars of the Chesapeake and its tributaries on a large scale. In order to carry this out, the gasoline tax on work boats was to be utilized for the expense of same. The department received from the State Comptroller from this source \$75,000 a year, which amount is actually paid in by the watermen, and we have been enabled thereby to plant approximately 1,000,000 bushels of shells a year on the oyster bars which required shelling.

In Queen Anne's County, since 1928, we have planted on the bars of Chester River, Eastern Bay and their tributaries, 549,191 bushels of shells. This does not include the Chesapeake Bay bars adjacent to Kent Island, where many more thousands of bushels have been planted in the dredging area, and thousands of bushels of seed oysters have been removed from the head of the Bay, Love Point bar, in order that they may properly mature.

Shell planting was recommended by the late Dr. William K. Brooks, of Johns Hopkins University, as far back as 1880, after his commission had made a survey to determine why

oyster production was showing a decline. However, the natural oyster bars at that time were producing something like eight to ten million bushels a year, and it was not thought necessary by the Legislature of that time to plant oyster shells. There is no question that this method, if carried out at that time, would have maintained a regular supply of oysters, and the production today would have been more than 5,000,000 bushels a year instead of a little over 2,000,000 bushels.

Oyster planting by private individuals in certain counties of Maryland is materially aiding the production. Somerset, Wicomico, Calvert, St. Mary's and the West River section of Anne Arundel have the greatest number of such planters, included among whom are many watermen, who find private oyster lands necessary and profitable in bringing up their incomes.

The crab industry, which was so near exhaustion in 1924, that but few crabs were caught above the Great Choptank River, has been put on its feet again through the cooperative efforts of Governor Ritchie and Ex-Governor Trinkle of Virginia, together with the Fishery Commissioners of the two States and certain men appointed from the various tidewater counties selected to help put over remedial legislation recommended by the U. S. Bureau of Fisheries. All the work of 11 years, which was required to persuade Virginia to pass the necessary protective measures, was worth while, and particularly to Queen Anne's County.

While our figures, which have been recently completed by the Seafood Auditor, show more than 20,000 barrels, or 23.8% of the total live hard crabs marketed in the State, as coming from Queen Anne's County waters, we may expect an even greater production in the future, as these crabs, when cooked and picked, yield a splendid quality of crab meat, and should bring the best of market prices.

The aforementioned crab survey brings out many astonishing facts, which convince one that the distribution of our crab meat, and in fact all of our sea food, is entirely too limited. As Conservation Commissioner, I feel it is my duty to put forth the best efforts of my Department to aid the crab and other sea-food packers to create a broader market for the water crops of the State. For instance, the Government statistics of 1924 show that the Chesapeake Bay produced 29,000,000 pounds of crabs, and these were consumed

by only four large cities—Washington, Baltimore, Philadelphia and New York. In 1931, the Chesapeake Bay production had increased to 68,000,000 pounds, but our survey showed that the bulk of the crab meat was consumed by the same four cities. Baltimore, with a population of 800,000 persons, used 1,500,000 pounds of our crab meat, and 600,000 pounds from Virginia, while the city of New York with a population of 7,000,000 used but 400,000 pounds. Outside of Pittsburgh, practically no crab meat is sold from the Chesapeake Bay. It is remarkable to note that very little of the crab meat shipped to Baltimore, Washington, Philadelphia and New York is re-shipped to other markets.

It was recently brought out at a hearing before the United States Tariff Commission in Washington that the Chesapeake Bay was now producing 80% of the crab meat produced in the United States, but that we import from Japan and Russia about 10,000,000 pounds of canned crab meat, valued at \$4,600,000 or a little more than half of the amount of crab meat used in the country. There is a duty of 15 % ad valorem on all such crab meat imported into the United States, yet it is the fear of many of our packers that this foreign product will seriously affect the demand for fresh meat from Maryland and Virginia. It is my own opinion that we have little to fear from this latest yellow peril, because with fresh crab meat six months of the year in Maryland and about nine months in Virginia, our people should show enough initiative to market at a profit all the crab meat that the Bay may produce.

The present income, \$371,065., from sea foods in Queen Anne's County should, with proper distribution, bring in \$500,000 a year, and this may be expected when the industry is properly organized. Last month a meeting was held in Easton, where more than 50 packers of Kent, Queen Anne's, Talbot and Dorchester met and organized for this purpose. A similar organization has been perfected in Somerset, and we are now working on the packing interests of the Western Shore and Baltimore City.

In the past two years, the quick freezing process for preserving fruits, vegetables, and now sea foods, has been perfected to such an extent that the juices and tissues of the frozen products are not destroyed, and by this means they may be transported to long distances and better distributed. Just at this time I am endeavoring to get a plant located in Maryland to take care of some of our surplus crab meat from the local packers, and thereby materially aid distribution.

It is very gratifying to see the results which are now showing up after so many years of unrewarded effort on the part of the Department, and I am more than glad to note that we are now, not only receiving the support of the business and professional men of the State but the watermen themselves are beginning to see the value of our labors, and giving the Conservation Department excellent support.



CRAB MEAT REPORT OF THE UNITED STATES TARIFF COMMISSION

In view of the probable interest of the crab packers of Maryland in the result of the crab meat investigation conducted by the United States Tariff Commission, in connection with the request for an increased duty on imported crab meat, the Conservation Department is reprinting the salient findings of the Commission as embodied in the published report to the President of the United States, under date of November 30, 1932.

UNITED STATES TARIFF COMMISSION

WASHINGTON

November 30, 1932.

CRAB MEAT

Report to the President

TO THE PRESIDENT—The United States Tariff Commission herein reports the results of an investigation of the differences in costs of production of crab meat, fresh or frozen (whether or not packed in ice), or prepared or preserved in any manner, including crab paste and crab sauce, in the United States and in the principal competing country for the purposes of section 336 of Title III of the tariff act of 1930, and its findings with respect thereto.

Upon consideration of the facts ascertained in this investigation the commission finds that cost of production in the United States and in the principal competing country of crab meat, fresh or frozen (whether or not packed in ice), or prepared or preserved in any manner, including crab paste and crab sauce, dutiable under the act of 1930 at 15 per centum ad val-

orem, do not furnish an adequate or proper basis for determining the duty under section 336.

The commission instituted this investigation May 26, 1932, in compliance with Senate Resolution No. 122, dated May 24, 1932. Public notice of the hearing was given on June 28, 1932. At this hearing, held in Washington, D.C., on October 4, 1932, parties interested were given reasonable opportunity to be present, to produce evidence, and to be heard, as required by law.

Findings of the Commission

1. Japan is the principal source of imported crab meat, supplying in 1930, 76 per cent of the total United States imports.

2. The domestic production of crab meat is principally on Chesapeake Bay. In 1930 production in that area constituted 85 per cent of the total United States production.

3. Costs of producing domestic and imported crab meat do not furnish a proper basis for fixing the duty on crab meat in accordance with section 336 of the tariff act of 1930, for the following reasons:

(a) The domestic and the imported crab meat are produced from two widely different species of crabs, each yielding meat distinguishable in taste, color and texture;

(b) Both the domestic and the imported meat are packed in a variety of grades. About 75 per cent of the imported product is high grade fancy meat, but only 29 per cent of the domestic product is the high grade fancy pack;

(c) All imports are nonperishable, packed in sealed tins, and capable of national distribution. Only about 2 per cent of the domestic production is thus packed, the remaining 98 per cent is the highly perishable cooked meat packed in unsealed tins;

(d) Wholesale prices of the domestic meat have fallen materially during the past three years, whereas prices of the imported product have remained almost stationary. The marked decrease in the price of the domestic product has been caused mainly by increased production and the physical difficulties of effecting wider distribution. Production in the Chesapeake Bay area increased from about 2,000,000 pounds in 1925 to about 5,200,000 pounds in 1931.

3. No findings are made with respect to crab paste and crab sauce because there is no domestic production of these products and imports are negligible.

Conclusions

The commission finds that the duty on crab meat cannot be changed in accordance with the procedure prescribed by section 336 of the tariff act of 1930.

Appended to this statement of findings is a summary of information obtained in the investigation.

Respectfully submitted:

ROBERT L. O'BRIEN, *Chairman.*
THOMAS WALKER PAGE, *Vice Chairman*
EDGAR B. BROSSARD,
JOHN LEE COULTER,
IRA M. ORNBURN,
CHARLES R. CRISP, *Commissioners*

Scope of the Investigation

This inquiry is confined to crab meat. Other crab products provided for in paragraph 721 (a) of the tariff act of 1930 are crab paste and crab sauce. There is no domestic production of these, and imports are negligible.

Domestic costs of production were obtained for thirty-one plants located in Maryland and Virginia on Chesapeake Bay, and for six plants located in Oregon, Washington, and Alaska. The Chesapeake Bay plants covered by the investigation accounted for approximately 56 per cent of the Atlantic coast production and 51 per cent of the total domestic production in 1931. The Pacific coast plants covered by the investigation accounted for approximately 45 per cent of the Pacific coast production and 3 per cent of the total domestic production.

Evidence of foreign costs of production was obtained for Japanese crab meat.

Costs of production of Japanese crab meat were obtained for one company and an analysis was made of customs, invoices and other entry papers covering imports from Japan. The company for which Japanese costs were obtained produced more than half of the Japanese pack of crab meat.

An exhaustive study was made of the domestic and foreign products with respect to physical comparability, prices, and methods of manufacture and distribution. Studies were made of the business structure and economic background of the domestic and foreign industries.

Description and Uses

Crab meat is the product of the cooked hard-shell crab, of which there are several species used. Upon being picked from the crab, it is graded and then packed either in sealed or in unsealed containers. That packed in unsealed containers, because it is perishable, is known to the trade as "fresh crab meat," and that packed in sealed containers is known as "canned crab meat."

Both products are used in salads, soups, and cocktails. The so-called fresh meat is also used extensively in deviled crabs and crab cakes; the use of the canned meat for these purposes is limited.

The consumer's preference for one type of pack, grade, or quality is influenced by (1) the use he intends to make of the product, (2) his familiarity with the various grades and types of pack, (3) the availability of the product, and (4) its price.

A more detailed description of the different species of crabs and of the different packs and grades of crab meat is given under "Comparability of Domestic and Imported Crab Meat."

Domestic Production

Hard crabs (the raw material for crab meat) are found along the entire coast of the United States and Alaska, but commercial production is confined to ten States on the Atlantic and Gulf coasts and to the three Pacific coast States and Alaska. Complete statistics of annual production over a period of years are not available. In 1930, production was 5,647,634 pounds, valued at \$1,839,868, of which 74,160 pounds, valued at \$56,370, were packed in sealed containers and 5,573,474 pounds, valued at \$1,783,498, were packed in unsealed containers.

Of the total production, 85 per cent came from Chesapeake Bay. There the pack has increased greatly in recent years. Although exact statistics of production of crab meat over a period of years are not available, the approximate pack may be readily calculated from official statistics showing the catch of hard crabs, most of which is used in the production of meat. On the basis of such calculations, the pack increased from 2,000,000 pounds in 1925 to 5,200,000 pounds in 1931. This increase was caused by a more abundant supply of crabs in recent years. Almost the entire pack on Chesapeake Bay is put up in unsealed containers. In 1931, only one plant packed in sealed tins.

(Turn to page 16)

MARYLAND FISHERIES

PUBLISHED BIMONTHLY BY CONSERVATION DEPARTMENT,
SWEPSON EARLE, Commissioner.

No. 20

JANUARY, 1933

ECONOMY AND CONSERVATION

THIS month marks the beginning of a very important meeting of the General Assembly of Maryland, a meeting at which many serious problems will confront the legislators.

The Governor has pared the Budget as closely as possible in the interest of economy, and curtailments will be required in every state department.

The Conservation Department has already received petitions from associations desiring a reduction of the oyster and shell taxes now paid by the oyster packers of Maryland. The Department is desirous of performing its duties with the least expenditure compatible with efficiency, but it does not believe that its efficiency should be jeopardized by the saving of a few dollars.

Special attention is called to the sea-food survey made by the Sea-Food Auditor, which shows the great value of this natural resource to the people of Maryland. On page one of this publication will be found a comparison of the relative values of the 75 square miles of water and 380 square miles of land comprising Queen Anne's County. This comparison shows that the waters are supporting a larger percentage of the population than the lands, and giving a much larger return for the effort expended.

This should be convincing proof that the Conservation Department is doing constructive work in the interests of the thousands of our citizens directly engaged in the sea-food industry, and the thousands of others who consume sea food.

It is believed that the Legislature will act with discretion should any bills be offered which would impede the progress of conservation work in Maryland.

FOR THE BEST INTEREST OF THE STATE

THERE is a law on the Statute books, which after defining the legal sizes of fish and crabs for the State of Maryland, imposes upon the Conservation Commissioner and his Inspectors the duty of seizing any and all fish or crabs caught, sold, offered for sale or held in possession in violation of any of the laws regulating the size of crabs and fish, whether the shipments are made from within or without the State, and further provides upon such seizure, that the illegal fish and crabs be disposed of at the discretion of the Conservation Commissioner "*for the best interest of the State.*"

It does not often happen that the imposition of the penalty for violation of a law confers any benefit beyond the usual one of tending to discourage a repetition of the offense, but a perusal of the Conservation Department's docket brings to light a double benefit from the enforcement of the above law.

Between June 1 and November 30, 1932, 101 dozens of undersized soft crabs, one barrel of undersized hard crabs, and 1800 pounds of illegal rock fish were seized by the Department's Inspectors in the fish markets of Baltimore City. The Commissioner, in exercising the discretion given him in the law, recognized that the interests of the State could best be served by turning over the confiscated sea food to such institutions as hospitals, the Salvation Army and the Family Welfare Association, where they were accordingly delivered.

Mention might be made of the fact that the fish seized came from Virginia and North Carolina and the crabs from Somerset County.



DISTRIBUTION OF GAME-FISH

The distribution of game-fish in the fresh water streams of the State will be of special interest to all anglers. The adult fish which were successfully placed in the streams under the supervision of the Superintendent of Hatcheries, and in many cases cheerfully assisted by members of the Isaac Walton League or The Maryland State Game and Fish Protective Association, attracted anglers from many sections of Maryland as well as non-residents of the State. The tabulation of anglers licenses in the Annual Report shows two thousand additional licenses issued over the previous year. This division of the Department has developed greatly since the passage of the Anglers License Bill in 1927.

PROPOSED LEGISLATION

THE CONSERVATION DEPARTMENT will have little to recommend in the way of new legislation to the 1933 session of the General Assembly.

In view of the fact that the supply of crabs in Maryland waters warrants the extension of the season to include the month of November, and also because the demand is very good during this month and the weather sufficiently cool to insure shipment without waste, the department is recommending the addition of November to the season for taking crabs in the State waters.

A bill will also be offered prohibiting the planting of Japanese oysters in State waters. Because of the danger connected with the introduction of this species, i. e., possible absorption of native oyster by hybridization with Japanese variety, inferiority of appearance and flavor to Chesapeake product and introduction of pests which might destroy our oysters, it was thought advisable to recommend this legislation.

At the last session of the legislature, the citizens of Talbot and Dorchester Counties closed the greater portion of Choptank River against scraping until November 1, 1933, as did likewise the citizens of Dorchester County with the waters of Honga River and Tar Bay. All of these waters have shown great improvement, and it is now a question whether the same interests which closed them will want to permit them to remain closed for a longer period or automatically open them at the expiration of the law. Due to the passage of this legislation, the department was obliged to place on duty special patrol boats, in order to properly protect these waters, and from the reports of our Deputy Commanders to the effect that the oyster bottoms show a marked improvement and contain a great many young oysters, which have caught during the closed season, the department would recommend the retention of the closed season for an additional period, or, if opened, the use of lighter dredges for working the bars. This latter provision would materially help in preventing great mortality among the young oysters usually caused by the weight of the dredges.

While not offering the Black Bass Legislation, the department is strongly in favor of its passage, and is backing it in

every possible way, since Maryland, in passing this bill, would only be following the example of forty other States in the Union.

The State Game Warden will recommend the enactment of certain minor changes in the game laws



PRESERVING YOUNG GROWTH ATTACHED TO SHELLS

ON DECEMBER 15th, the Conservation Commissioner, accompanied by Chief Clerk H. H. Johnson, made an inspection of a number of the oyster packing plants on the Eastern Shore for the purpose of observing the shell piles, as it was reported that large quantities of young growth attached to the shells were being thrown out to die.

At Kent Island Narrows several of the houses were visited, and it was found that a considerable quantity of young oysters had gone on the piles during the early part of the season, but at present the shells showed very little young growth.

At Easton, Mr. Robert H. Harrison, who is a member of the Advisory Committee, met the Commissioner and Mr. Johnson, and together they visited St. Michaels. It was found that some of the shell piles contained young oysters, which it was deemed advisable to throw back overboard for future growth, and arrangements were accordingly made for this to be done.

The following morning Cambridge was visited, where Chief Inspector Townsend and Mr. John T. Handy, member of the Advisory Committee for the lower Eastern Shore, joined the party. A number of oyster houses and shell piles were inspected, including the house of John M. Clayton & Company, where a conference was held with Mr. Carl Veach, President, who is running many scow-loads of shells containing small oysters and spat, directly to the oyster rocks. Upon inspecting the shell piles of T. E. Jones & Company, it was found that a great many oysters coming from the Fishing Bay area contain young growth, and arrangements were made whereby such shells would also be put overboard on the rocks in a green state.

The department's inspectors at Cambridge were instructed not to permit any shells to be put overboard, containing young growth, when the weather was freezing, as the small oysters would be destroyed before being placed back in the water. While at Cambridge it was decided where to plant oyster shells in the lower Eastern Shore waters, in Mr. Handy's district.

MARYLAND FISHERIES

DISTRIBUTION OF GAME FISH IN STATE WATERS
DURING 1932

COUNTY	NAME OF STREAM	SPECIES	No.	SIZE
Allegany.....	Potomac River.....	Small-mouth bass.....	178	4-6
	Potomac River.....	Large-mouth bass.....	90	5
	Total.....		268	
Anne Arundel.....	Kitten Run.....	Brook trout.....	32	A
	Stony Run.....	Brook trout.....	80	A
	Severn Run.....	Brook trout.....	602	A
	Kitten Run.....	Rainbow trout.....	20	A
	Stony Run.....	Rainbow trout.....	30	A
	Severn Run.....	Rainbow trout.....	66	A
	Total.....		830	
Baltimore.....	Gwynn's Falls.....	Brook trout.....	80	A
	Red Run.....	Brook trout.....	90	A
	Oregon Branch.....	Brook trout.....	80	A
	Western Run.....	Brook trout.....	340	A
	Evans' Run.....	Brook trout.....	60	A
	Baseman's Run.....	Brook trout.....	30	A
	White's Branch.....	Brook trout.....	30	A
	East Branch (Patapsco).....	Brook trout.....	72	A
	Piney Run.....	Brook trout.....	60	A
	Beaver Dam.....	Brook trout.....	46	A
	Sharon.....	Brook trout.....	100	A
	Gunpowder River.....	Rainbow trout.....	120	A
	Beaver Dam Run.....	Rainbow trout.....	10	A
	Piney Run.....	Rainbow trout.....	10	A
	Total.....		1,128	
Caroline.....	Smithsville Pond.....	Crappie.....	4,000	3
	Electric Light Pond.....	Crappie.....	4,000	3
	Linchester Pond.....	Crappie.....	4,000	3
	Smithville Pond.....	Large-mouth bass....	1,020	4-6
	Linchester Pond.....	Large-mouth bass....	1,000	4-6
	Total.....		14,020	
Carroll.....	Bear Branch.....	Brook trout.....	300	A
	Bear Branch.....	Rainbow trout.....	41	A
	Little Pipe Creek.....	Small-mouth bass....	4,100	2-6
	Big Pipe Creek.....	Small-mouth bass....	480	4-6
	Double Pipe Creek.....	Small-mouth bass....	260	4-6
	Patapsco River (W. Br.)..	Small-mouth bass....	250	4-6
	Total.....		5,431	
Cecil.....	Perryville Reservoir.....	Brook trout.....	100	A
	Hines' Run.....	Brook trout.....	300	A
	Perryville Reservoir.....	Rainbow trout.....	50	A
	Total.....		450	

NOTE: (A) Indicates ADULT. Numbers indicate size of fish according to inches.

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COUNTY	NAME OF STREAM	SPECIES	No.	SIZE
Frederick.....	Little Hunting Creek.....	Brook trout.....	100	A
	Big Hunting Creek.....	Brook trout.....	1,510	A
	Fishing Creek.....	Brook trout.....	4,967	A
	Tuscarora.....	Brook trout.....	1,500	A
	Friend Creek.....	Brook trout.....	700	A
	Turkey Run.....	Brook trout.....	600	A
	Big Hunting Creek.....	Rainbow trout.....	538	A
	Fishing Creek.....	Rainbow trout.....	1,400	A
	Tom's Creek.....	Small-mouth bass....	300	4-6
	Potomac River.....	Small-mouth bass....	400	4-7
Total.....			12,015	
Garrett.....	White Rock.....	Brook trout.....	848	A
	Salt Rock.....	Brook trout.....	300	A
	Bear Creek.....	Brook trout.....	6,800	A
	Little Savage.....	Brook trout.....	1,652	A
	Mill Run Creek.....	Brook trout.....	200	A
	Savage River.....	Brook trout.....	1,200	A
	Hoys' Run.....	Brook trout.....	178	A
	Rock Lick.....	Brook trout.....	86	A
	Ball Hill Run.....	Brook trout.....	192	A
	Gap Run.....	Brook trout.....	166	A
	Little Bear Creek.....	Brook trout.....	200	A
	Little Youghiogheny.....	Brook trout.....	200	A
	Dunkert Lick.....	Brook trout.....	75	A
	Herrington Creek.....	Brook trout.....	130	A
	Red Run.....	Brook trout.....	48	A
	White Rock.....	Brook trout.....	548	A
	Cherry Creek.....	Brook trout.....	1,000	A
	Muddy Creek.....	Brook trout.....	100	A
	Deep Creek Lake.....	Brook trout.....	2,500	A
	Deep Creek Lake.....	Brook trout.....	2,500	6
	Sang Run.....	Brook trout.....	80	A
	Broad Ford.....	Brook trout.....	300	A
	Trout Run.....	Brook trout.....	300	A
	Murley Creek.....	Brook trout.....	300	A
	Shields' Run.....	Brook trout.....	300	A
	Savage River.....	Rainbow trout.....	130	A
	Casleman River.....	Rainbow trout.....	120	A
	Bear Creek.....	Rainbow trout.....	200	A
	Dunkert Run.....	Rainbow trout.....	100	A
	Youghiogheny River.....	Rainbow trout.....	210	A
	Bear Creek.....	Rainbow trout.....	3,200	5-7
	Two-Mile Run.....	Rainbow trout.....	300	5-7
	Shade Run.....	Rainbow trout.....	250	5-7
	Red Run.....	Rainbow trout.....	500	5-7
Total.....			25,213	
Harford.....	Elbow Branch.....	Brook trout.....	100	A
	Conowingo Lake.....	Yellow Perch.....	1,500	A
Total.....			1,600	
Howard.....	Cat Tail Creek.....	Crappie.....	150	A
	Patuxent River.....	Crappie.....	150	A
	Rock Run.....	Brook trout.....	105	A
	Little Patuxent River.....	Brook trout.....	210	A
	Little Patuxent River.....	Rainbow trout.....	48	A
Total.....			663	

MARYLAND FISHERIES

COUNTY	NAME OF STREAM	SPECIES	No.	SIZE
Kent.....	Brice's Mill Pond.....	Large-mouth bass....	2,000	4
	Almshouse Branch.....	Large-mouth bass....	2,000	4
	Chester River.....	Crappie.....	3,000	3
	Brice's Mill Pond.....	Crappie.....	10,000	3
	Almshouse Branch.....	Crappie.....	10,000	3
	Total.....		27,000	
Washington.....	Saint James' Run.....	Rainbow trout.....	1,148	A
	Simple Run.....	Rainbow trout.....	1,160	A
	Little Beaver Creek.....	Rainbow trout.....	1,150	A
	Marsh Run.....	Rainbow trout.....	1,200	A
	Lane's Run.....	Rainbow trout.....	1,400	A
	Conococheague.....	Rainbow trout.....	400	A
	Licking Creek.....	Rainbow trout.....	400	A
	Marsh Run.....	Brook trout.....	320	A
	Potomac River.....	Small-mouth bass....	1,600	4
	Total.....		8,778	
Wicomico.....	Pocomoke River.....	Crappie.....	10,000	3
	Pocomoke River.....	Large-mouth bass....	1,160	4-6
	Total.....		11,160	



CRAB MEAT REPORT OF THE UNITED STATES TARIFF COMMISSION

(Continued from page 9)

On the Pacific coast most of the pack is put up in unsealed containers, but in Alaska the tendency is toward a larger production in sealed tins. In 1931, the total Pacific coast pack probably did not exceed 400,000 pounds.

Exports

There are no exports of domestic crab meat.

Imports

For the seven-year period 1925 to 1931, the annual imports of crab meat averaged 10,417,820 pounds, valued at \$4,268,613. Japan supplied 92 per cent of the total, and Russia most of the remaining 8 per cent. In each of the seven years, Japan was the principal source. About three-fourths of the imports from Japan are fancy meat of the deep-sea king crab. *Relatively small quantities of meat prepared in Chosen from the "Korean crab" are imported from Japan.

*An analysis of imports at New York and San Francisco during the year 1931 disclosed that imports by grades were as follows: Fancy, 74 per cent; Passed A, 11 per cent; Choice, 10 per cent; Fair, 2 per cent; Korean, 3 per cent.

Comparability of Domestic and Imported Crab Meat

The crab meat entering into the commerce of the United States is obtained almost entirely from the following species:

1. United States blue crab, *Callinectes sapidus*.
2. United States dungeness crab, *Cancer magister*.
3. Japanese deep-sea crab, *Paralithodes camtschatica*.
4. Korean crab, *Erimacrus isenbeckii*.

Production consists wholly of cooked meat. Grading is first done according to the part of the body from which taken, and then according to size of pieces; i. e., claws or legs are separated from body meat and further divisions are then made according to size of pieces, special or lump, and regular or white. Some packers mix particular parts and sizes. In all areas the general practice is to segregate the largest chunks of meat, for they command the highest price.

The domestic pack is prepared from the blue and from the dungeness crab. The blue crab is the smaller of the two, and both are much smaller than either the Japanese deep-sea or Korean crab. The production of large pieces of meat is consequently much greater in the foreign country. Both the foreign and the domestic pack are graded on the basis of size of pieces.

Color of meat is another important factor in determining market value. The preference for large pieces is sometimes subordinate to the preference for a given color. For example, large pieces of blue crab claw meat, because they are comparatively dark, are much lower in price than small bits of white meat taken from the body of the same crab. On the other hand, the leg meat of the Japanese crab, which has a red coat causing it to resemble the meat of canned lobster, accounts in part for its partial interchangeability with imported canned lobster meat.

Reference has been made to the division of meat according to the part of the body from which taken. Meat from the same part of the body of different species of crabs does not, however, sell at the same price. For example, the highest priced meat obtained from the Japanese crab, as well as that obtained from the domestic dungeness crab, comes from the leg, whereas the highest priced meat obtained from the domestic blue crab comes from the body.

All imported, and practically all domestic meat are put up

in tins. The bulk of the domestic is packed in unsealed tins, and for this reason must be packed in crushed ice and sold for immediate consumption. All imports, and a small part of domestic production consist of sterilized meat packed in sealed tins. Meat so packed, if properly sterilized, will keep over long periods. To distinguish the two packs in commerce the unsealed is referred to as "fresh," and the sealed as "canned." The principal sizes of tins used are as follows: Imported meat in sealed tins containing 6½ ounces and 13 ounces; domestic meat in sealed tins containing 6 ounces; domestic meat in unsealed tins containing 16 ounces.

Prices are more stable for meat packed in sealed tins than for that packed in unsealed tins. Because of its perishability the meat in unsealed tins is subject to sharp fluctuations in price, and agencies marketing it differ from those marketing sealed tins. The imported pack, all of which is put up in sealed tins, is marketed by a small number of distributors, whereas the domestic pack, the bulk of which is put up in unsealed tins, is marketed mainly by commission merchants.

Domestic Costs of Production

Costs of raw material and packing were obtained for the year 1931 from 37 domestic plants which together produced 3,679,620 pounds of meat, or about 54 per cent of the total domestic production in that year. The location and the number of plants for which costs were obtained were as follows:

Location.	Number of Plants.
Atlantic Coast:	
Maryland—	
Cambridge	1
Claiborne	1
Crisfield	10
Deal's Island	1
Fishing Creek	1
Honga	2
Oxford	2
St. Michaels	2
Tilghman	3
Wenona	2
Wingate	3
Virginia—	
Hampton	3
Pacific Coast:	
Washington—	
Seattle	2

Location.	Number of Plants.
Oregon—	
Reedsport	1
Warrenton	1
Alaska—	
Petersburg	1
Cordova	1
Total	<u>37</u>

All but two of the plants enumerated packed crab meat in unsealed containers exclusively. These two plants, one in Alaska and one in Virginia, packed over 90 per cent of the total domestic production of sealed-container crab meat. As publication of the costs of the two plants would reveal individual enterprise they are not included in this report.

In the fishing branch of the industry almost all units of production are small one-man boats. In the cost calculations the price paid to fishermen for crabs used in the production of meat was therefore taken as the cost of raw material.

In calculating costs according to grades of meat and sizes of tins, the following items were charged directly: Picking labor, containers, ice, fuel, water, and power. The other items of cost—raw crabs, repairs, and overhead—were distributed on the basis of sales value of the finished product after deducting the direct costs.



"HANDSCRAPERS" DEFY POLICE FORCE ON POTOMAC RIVER

A SPECIAL DISPATCH was received on November 25, from the Department's inspectors, George Garner Gibson and J. R. Simms, stationed on the Potomac River, stating that they were fired upon by "handscrapers" who defied them to arrest a violator caught on Thanksgiving Day, and forced them to release the prisoner.

The Conservation Commissioner at once instructed Captain Creighton to get the Steamer McLane ready to go to the Potomac. Conditions became more serious on the 26, and in response to a telephone message from Senator Coad of St. Mary's County, the Commissioner placed on board the Steamer Dupont, arms and ammunition, and proceeded to the Potomac river on Sunday, November 27, arriving at the Wicomico river that night.

After conferring with Captain J. G. Heflin of the Virginia police force on Potomac river, and the Maryland officers, it was found that "handscraping" had reached such a point that immediate and firm steps were necessary to put a stop to it. Investigation also showed that Inspectors Simms and Garner would undoubtedly have been killed on Thanksgiving Day, had they not complied with the demand made by some fifty "handscrapers" armed with shotguns.

A machine gun from the steamer was transferred to the police boat Kent, and a shift of some of the officers was deemed essential. Commissioner Armstrong of Virginia, in response to a wire from the Maryland Commissioner, joined him at Colonial Beach, where a conference was held on the McLane. It was decided that the Virginia police steamer join the Maryland forces and run the violators to cover. The two steamers remained on patrol duty for a week and then alternated and returned to the Potomac as conditions warranted. Spasmodic attempts have been made by the "handscrapers" to work in the river, but the general situation has been quieter.

"Handscraping" is difficult to prevent, due to the fact that these fast boats, with collapsible dredges, operate at night, and when pursued cut loose the lines towing their dredges, making apprehension difficult. Many of the trouble makers are from Tangier, Smith Island, and some from the York river. With this situation confronting the two departments, Potomac River oyster bar protection is not easy, but it is the firm determination of the State of Maryland and the Commonwealth of Virginia to see that the concurrent laws governing the Potomac are enforced.